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City planning and urban development in Mekelle

Report on a study stay in spring 2017

At this year's German Week, in addition to the core competencies of the Witten-Ethiopia association, which was designed in the medical sector, the topic of planning and waste disposal in Mekelle should be considered too. The background to this was the experience gained with regard to the use of fire-fighting vehicles: Due to problems in the accessibility of buildings it was asked, whether the necessary coordination between the relevant services is sufficient in the planning or building permission processes. In this context questions also arose about the planning principles and planning rules in Mekelle.

After an approximately only one-week stay, a metropolis like Mekelle can only be recorded and described roughly. To get an overview and the needed informations the several meetings with the responsible city planner were very helpful. Therefore I would like to thank you very heartily for your time and patience to answer all my questions.

In the following, at first after some basic framework conditions the first urban planning focused impressions of Mekelle are described. After that some special topics are focused for the future work.

City and society in upheaval

Like all Ethiopian cities, Mekelle had to cope with significant population growth in recent years. In 1964 Mekelle counted 61.583 inhabitants. 1994 it was according to Wikipedia 96.938 and in 2007 already 215.915 inhabitants. For 2015.- only eight years later - 323.700 inhabitants were predicted, representing a population growth of 5.1%.

(www.citypopulation.de/Ethiopiad.html). In comparison: The population growth in FRG in 1965 (during the strongest birth year) was 4.3%. For Mekelle, the police currently estimates about 350.000 inhabitants.

It is difficult to predict whether the population in Mekelle will continue to grow in the next years with similar dynamics, especially as the official figures can only reflect the actual population development to a limited extent (immigration without registration). Within the framework of the stay, there was no opportunity to check the population figures projected by the city or regional administration for Mekelle. In this respect, it is open on which data and future population the planning of the city and of all supply carrier refer to.

As the capital of the Tigray region, the rapidly growing city of Mekelle is influenced by a variety of structural changes. On the one hand, it has to provide adequate social and technical infrastructure (schools, kindergartens, housing, roads, water supply, garbage, etc.) for the rapid population and urban development requirements. On the other hand, sufficient jobs have to be created for the growing urban population in order to meet the high unemployment and the precarious living conditions of a high population share. Added to this are the environmental concerns, which are intensified due to the expansion of the city, the growing car ownership, the ongoing social differentiation and future urbanization. They require an early and coordinated action by all stakeholders, so that Mekelle can itself not only develop economically but also socially and ecologically sustainable.

The country, which has been characterized by centuries of traditions, is in an extreme state of upheaval: international economic associations, consumer goods from distant countries and above all the modern media (smartphone, television broadcasts from all over the world) feed daily values and needs from developed industrialized countries into daily life of the population, which for this is not or at only limited socialized. This raises expectations and encourages structural changes that jump through several levels of technological development, social life, and work organization. ... It is to be feared that a part of the population, especially those who are not or only very few educated, and the rural population affected by the city expansion, will not be able to cope with these changes.

Because the population of Mekelle grows like in hardly now other Ethiopian city it is necessary to develop and implement in a timely manner new housing estates, new jobs, the technical infrastructure (roads, water supply, waste disposal, etc.). But also it is necessary to realize the needed social facilities (schools, Hospitals) in time for the growing population. ... For the city and people of Mekelle it is a Hercules task, which requires a strong city administration, a powerful city council and also an adaptable civil society.

Local exploration

Although Mekelle was already established in the 13th century and was an important transshipment point for Danakil salt, it remained rather insignificant until it became the capital of the imperial empire in 1881. Several buildings, such as the palace and churches (including Medhane Alem, St. Tekle Haimanot) erected under the then Emperor John IV, are still preserved and in use. However, from this time on, urban development as a residential city with a correspondingly representative urban structure can not be recognized. Perhaps this is the result of the short duration as the Ethiopian capital. For with the death of John IV in 1889, the seat of the capital changed directly to the present Addis Ababa by the subsequent Emperor Menelik II.

To the important city with strong population growth, corresponding building boom and extensive city extensions, Mekelle became only since its designation the capital of the newly founded regional state Tigray from the beginning of the 1990er years. Since then, many regional administrations have been established here, the airport, the university have been built and massive investments have been made in the public infrastructure. As a regional capital, Mekelle is an important location for banks, insurance companies and larger business enterprises, and last but not least, an investment location for foreign companies. Currently, large companies from China and India are setting up two commercial sites each with more than 100 hectares of land on the outskirts of the city. In addition to the urgently needed new jobs for the growing population, they are to contribute to the further economic strengthening of the city's jobs.

Mekelle is difficult to grasp for the European visitor coming into the city for the first time. Though the Halveti martyr monument, visible from everywhere, the Abreha Castle Hotel as well as the Regional Museum (Palace of St. John), as well as individual churches and mosques, the university exposed on a plateau above the city and several large-scale buildings Hotels and commercial buildings are orientation points. However, they stand as isolated buildings in the city structure and structure the increasingly sprawling city only conditionally. Spatial structures familiar to the visitor from the European context and un-

derlining the importance of Mekelle as a former residence city or highlighting it as the capital of the Tigray region are only recognizable.

Older neighborhoods

Mekelle's Old Town district is built in chessboard pattern with densely built building blocks in the area between the Tigray Regional Museum and the Abreha Castle. In the west they reach Alula Street / Selam Street and in the east to Godena Guna. The predominantly one-storey two-storey houses are partly built of rock and contain numerous restaurants, bars, shops and billiards. Like many other (residential) districts, the districts have a coherent appearance developed from the local building tradition. However, isolated new buildings such as the newly opened Hotel Zamarias, jeopardize the small-scale structure by their different utilization and large scale.



The streets are covered with cobblestone and are often planted with jacaranda trees. In addition, the roads are only slightly parked due to the low degree of motorization so that there is enough place for the tuktuks, mopeds, and the pedestrians, which are dominating the road area,. With its many coffee shops, which are open to the street, this city district provides a peaceful ambience inviting you to linger and unwind. This calmful ambience changes clearly in the evening, as the old town quarter, which is appreciated by the youth, students and tourists, is obviously the main attraction for nightlife. In addition to the restaurants, there are also numerous bars with loud music attracting attention and paying customers.

Business center, trade and services

The business center is located directly west along the bustling main street Alula / Selam Street with countless small shops, restaurants and craft shops. The road is clamped as a central axis between the distinctively designed roundabouts of Castle Square and the Piazza at the Tigray Regional Museum. There is a lot of traffic because it is main north-south road and is also a distributor for the western part of the city, which is dominated by shops and trade companies. The Romanate Square, which is located in the middle of the street section, is a point of reference in the cityscape with its small green area. At the same time, it is an important distribution point in the direction of the post station and the shops along Hahnefen Street.

The buildings parallel to the street are predominantly two to four stories higher than in the adjacent quarters. On the other hand, markedly higher buildings have isolated emerged at places which which can not be justified by urban development. Further large-scale buildings under construction clearly show that there is obviously a special interest in investing. However, it is not to be seen that the smultistory houses and skyscrapers, which break through the overcoming neighborhood and building typology, follow a planning

concept. On the contrary, they give the impression of the accidental, arbitrary. Whether the consequences associated with projects are adequately regulated, eg for additional traffic, shading, fire protection, etc., is at least questionable according to European standards.



Like almost all construction areas, the highly active and lively trading and business district has been built in a chessboard pattern with mainly one- or two-storey buildings. Expansions currently take place towards the western market and the open spaces bordering the south. The roads have clearly defined widths and so far can accommodate the numerous Tuktuks, horses and donkey carts as well as the increasingly available pick-ups and sword-transporters without major problems. There are bottlenecks only in particularly busy and traffic areas and road sections used for goods distribution. Here, and also in adjacent narrow streets, it is to be expected that in future the increasing motorization rate as well as the increasing possession of larger vehicles will restrict the traffic flow and the accessibility.



Banks and service

With existing banks and insurances, commercial properties, and large-scale hotels and other buildings under construction, the road between Ethiopian Commercial Bank / Alula Street and the Axxum Hotel is becoming a major service and business location in Mekelle.

The change to a modern city is nowhere else so directly to feel as here: In the immediate vicinity meets closely the old building tradition with its small structures and its popular coffee shops, restaurants and small shops with the new large-scale buildings, which are unusual in Mikelles cityscape until now. Modern restaurants and several modernized shops illustrate that business is likely 'going well' and investments are worthwhile. For large investments it is obviously an attractive area, which is reflected among other things by the large buildings that have arisen in the vicinity of the commercial street. Especially

the skyscrapers under construction clarify how attractive this area is for business-investments and the development towards an area as a 'business and service mile'.



Market, Elala creek

Mikelle's central market is located in the Muslim district between the main road leading to the Martyrs Monument and the inconspicuous creek running west of the business and trade center. The market with its countless stalls, the offered goods and an incredible density with flying buildings and narrow streets forms a self-contained quarters of its own. Even the smallest alcoves are still being claimed by the sales booths, so that Europeans are forced to ask questions about hygiene and safety in emergencies.



The creek, which borders the market to the east, does not carry water during the rainless season. Unfortunately it has degenerated here as in other places in the urban area to a wild dump. But this is one of the inflows, which in their further course provide the Romate waterfall, which is located only eleven kilometers away, with water. Since the houses as well as the market stalls were built up close to the river bank, the creek, which is partly planted with trees and shrubs, unfortunately is not at all or only difficult to recognize. In this respect it currently do not have any significance as a green route or as an element to structure of the mainly stony city.



Hawelati Monument, Mekelle Stadium, Citycrown

That Mekelle wants to underline its importance as the capital of the Tigray region with effective urban gestures can be seen with the Hawelati Monument, is accompanying Congress hall and Civil War museum, the adjacent football stadium and the skyscrapers currently being built along the developed main road. Due to its topographically exposed location, this generously-designed urban space is visible as the city crown of Mekelle. It is to be hoped that the further development of this area, which is very striking for the city, follows a clearly formulated development and design concept.



New residential areas

Land has been state-owned in Ethiopia since the founding of the Democratic Federal Republic of Ethiopia in 1995. The land required for private purposes (dwellings, commercial establishment etc.) is handed over to a firm and a private landlord against a fixed hereditary lease. The contract period is for commercial purposes 80 and for residential use 99 years. For the newly planned areas of construction, the regulations issued by the Ministry of Urban Development and Construction in Addis Ababa (Revised Standards for Structure Plan Preparation and Implementation, edited 2012) are applied. These very detailed specifications correspond in principle to the instruments of German planning and construction law. Due to the relatively easy access to previously agricultural used areas (the land rented can be compensated according to fixed rates) the city can overplan the land required for new residential or commercial land without major property barriers and then develop it.

In Mekelle, large-scale construction activities for new residential areas are taking place in the outdoor areas. In order to meet the large demand for land, large areas are being developed and gradually built up by private owners or building societies. The urban structure of the recently constructed as well as of the planned construction areas / settlements is very schematic because of the orthogonal basic structure in connection with the through-use of terraced buildings. Urban concepts which create variations of the living areas and that take into account the natural spaces or topographical peculiarities are the exception.

In view of the tightly dimensioned residential streets it is unclear whether in future with a higher motorisation degrees the construction areas have sufficient space for parking and rescue vehicles. Due to the urban design, the construction density as well as the size of

the building area, there is only a limited offer of open spaces for public use. On the other hand, the subassemblies with 80 houses, which were built close to the football stadium and other places have a significantly better free-space supply. They are arranged as a houseblock each around a large free space.



New business

In the city, two large industrial areas are currently being developed by foreign investors and built with halls. In the north it is an Indian company that produces a six-hectare hall for the textile industry. In the south-west, a Chinese industrial group is also building a commercial area with a total area of approximately 100 hectares with associated streets and several halls. The areas appear to comply with recognized planning standards. The halls seem also be equipped with the necessary technical facilities (e.g fire brigade).



Planning regulations, building code

According to the information available so far, the planning instruments used in Ethiopia are largely comparable to the German planning instruments (eg land use plan, development plan or building regulations). The following planning bases and requirements must be used for the development of new construction areas:

- Local Development Plan Manual

Publisher: Ministry of Works and Urban Development, Federal Urban Planning Institute Addis Ababa 2006

- Revised Standards for Structure Plan Preparation and Implementation

Publisher: Ministry of Urban Development and Construction, Urban Planning, Sanitation And Beautification Bureau, Addis Ababa 2012.

Whether other legal instruments / norms exist is not known so far. It is also not known whether the legal instrument of the "Local Development Plan (LDP)", which is comparable to the German development plan, can be applied to (already) built-up areas to prevent undesired developments (eg oversized construction projects), or else to promote projects in a targeted manner.

However, the mentioned regulations provide a good basis for legally fixing the development of new areas of construction. Currently, the planning instruments are used extensively for the expansion of the city, including the environmental surveys (population data, population populations, etc.). In 2017 for example, a local development plan has been established that develops an area for approximate fifty thousand (!) inhabitants.

It is unclear whether there are any further regulations for the planning and approval of construction projects. Object-oriented it is primarily a questions of preventive fire protection, but also if sufficient parking space is foreseen for the rising mobility-standard. In the case of major construction projects in existing areas (eg old quarters), the effects associated with the projects (shading, new traffic flows, stationary traffic, fire protection, etc.) for the environment must also be regarded while the building permit procedure. At present it seems that there are no clear guidelines or responsibilities between the authorities for the coordination for the preventive fire protection.

Municipal planning guidelines, guiding principles

The existing planning instruments/- rules are of decisive importance for the enforcement of municipal planning targets. However, they are neutral and a non-targeted tool for the implementation of the city planning goals. In terms of content, the planned urban development must be prepared through urban development programs and is made through concrete planning concepts. Only in this way can statements be developed, for example for the urban space structure, the natural space structure, the functional division of labor in the urban area or the future image of the city etc..

It was not possible to clarify whether specific guidelines for urban development (programs, spatial principles, etc.) for Mekelle were elaborated and politically defined as a guideline for further urban development.

Fields of action

From the impressions gained in Mekelle in a short time, only first hints can be formulated. And they have to be considered too in view of the abundance of the tasks that have to be handled on site as well as in view of the the social development and the assessment which are often different for European conditions. Therefore the following topics are the starting point for the consideration of specific questions.

Cityscape

As a result of the large-scale new construction projects Mekelle's city image is currently changing considerably. With it the traditional patterns, functionstructures and the cityscape are changing especially in the quarters of the Old Town. It is unclear whether the investments were made on the basis of an integrated citydevelopment concept for the

city, in which the effects on the cityscape, transport infrastructure, the quality of public space, parking etc. were examined holistically. For the cityscape of Mekelle but also for the investment security of investors clear objectives should be formulated in this sense.

Urban structure, new construction areas

Mekelle is rapidly growing into the surrounding area through the currently under construction areas and the new planned areas. The construction areas are largely a schematic continuation of the existing structures in the urban area. In addition there are only some urbanistically motivated caesurs or landmarks so that the new areas of construction appear monotonous and do not contribute to an improvement of the townscape of Mekelle.

- For the cityscape and the distinctiveness of the quarters, but also the attractiveness for the inhabitants, it is necessary that urban and building structure of the new development areas should be developed more specific/individuel.
- Through the simultaneously construction of houses and apartments for several thousand inhabitants the city actually looks like a single major construction site in its outskirts. For the newly planned town districts therefore it should be examined whether a realization in prdetermined time intervals is possible to avoid long-term and permanent construction activities.
- With regard to increasing motorisation levels and parking requirements, it is necessary to inquire whether the planned road routes are capable of absorbing the dormant traffic in the residential areas without restricting / blocking the roads for emergency vehicles.

Older neighborhoods

The areas developed in the traditional building tradition convey until now a coherent appearance. However new building investments are changing the functional context and structure in addition with increasing demands on public space. In this context, large-scale new construction projects in old quarters should be critically questioned. On the other hand in the case of intended locations, all quarter-related consequences have to be agreed with all specialist departments to provide negative consequences.

The higher degree of motorization, which is expected as a result of increasing prosperity, will place ne wand further demands on the existing areas. Therefore, the topic of accessibility for emergency vehicles, in particular the fire brigade, has to be specially observed for existing quarters and new building projects.

Outlook

The urban development of Mekelle can only be developed, managed and implemented by local experts, the city administration, the politicians and last but not least with the local citizens involved in urban development. For this process and purpose external experts can be consulted for specific questions. They can give hints and professional suggestions and take part on discussions to expert opinions for the urban deveelopment of Mekelle.

In this sense, the city-planning support of the Witten-Ethiopia association is also to be understood. It can identify specific topics relevant to the city planning and deepen specific questions with the relevant contact persons. In this sense, the subject areas mentio-

ned here are intended to give some impetus for the planning development of the city of Mekelle.

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